

REPLACED BY
PAT 344001

CLAIMS

1. A boat for a thermal process comprising:
 - a plurality of pillars,
 - a plurality of claws formed in each of the pillars in a height direction at predetermined intervals,
 - a plurality of supporting plates mounted in a tier-like manner between the plurality of pillars via the claws, each supporting plate having an object-to-be-processed mounting surface on which an object to be processed can be mounted, and
 - a groove and a through hole provided in the object-to-be-processed mounting surface.
2. A boat for a thermal process wherein
 - a minute irregularity is provided in the object-to-be-processed mounting surface in order to inhibit sticking of the object to be processed.
3. A boat for a thermal process according to claim 1 or 2, wherein
 - the supporting plates are substantially circular, and
 - the plurality of pillars are arranged behind, on the left hand of, and on the right hand of the supporting plates, perpendicularly to the supporting plates.
4. A boat for a thermal process according to claim 3, wherein
 - the supporting plate has
 - a left engaging part that can be engaged with a claw of the pillar on the left hand of the supporting plates in order to prevent dropping of the supporting plate, and
 - a right engaging part that can be engaged with a claw of the pillar on the right hand of the supporting plates in order to prevent the dropping of the supporting plate.

5. A boat for a thermal process according to claim 4, wherein

each of the left engaging part and the right engaging part is a stopper member that is abutted against a lateral wall part of the claw.

6. A boat for a thermal process according to claim 3, wherein

the supporting plate has

a left engaging hole that can be engaged with an upper portion of a claw of the pillar on the left hand of the supporting plates,

a right engaging hole that can be engaged with an upper portion of a claw of the pillar on the right hand of the supporting plates, and

a back engaging hole that can be engaged with an upper portion of a claw of the pillar behind the supporting plates.

7. A boat for a thermal process according to any of claims 1 to 6, wherein

dummy plates are mounted at an upper end portion and a lower end portion of the pillars.

8. A boat for a thermal process according to any of claims 1 to 6, wherein

a plurality of dummy plates are mounted in a tier-like manner between the plurality of pillars via the claws, at an upper end portion and a lower end portion of the pillars, respectively.

9. A boat for a thermal process according to claim 8, wherein

the dummy plates are substantially circular, and

the plurality of pillars are arranged behind, on the left hand of, and on the right hand of the dummy plates, perpendicularly to the dummy plates.

10. A boat for a thermal process according to claim 9, wherein

the dummy plate has

a dummy-plate left engaging part that can be engaged with a claw of the pillar on the left hand of the dummy plates in order to prevent dropping of the dummy plate, and

a dummy-plate right engaging part that can be engaged with a claw of the pillar on the right hand of the dummy plates in order to prevent the dropping of the dummy plate.

11. A boat for a thermal process according to claim 10, wherein

each of the dummy-plate left engaging part and the dummy-plate right engaging part is a stopper member that is abutted against a lateral wall part of the claw.

12. A boat for a thermal process according to claim 9, wherein

the dummy plate has

a dummy-plate left engaging hole that can be engaged with an upper portion of a claw of the pillar on the left hand of the dummy plates,

a dummy-plate right engaging hole that can be engaged with an upper portion of a claw of the pillar on the right hand of the dummy plates, and

a dummy-plate back engaging hole that can be engaged with an upper portion of a claw of the pillar behind the dummy plates.

13. A vertical thermal processing unit, wherein

a boat for a thermal process according to any of claims 1 to 12, and

a thermal processing furnace that can contain the boat for a thermal process.